

DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE  
WASHINGTON 25, D.C.



REPLY TO  
ATTN OF:

OSA-4300-65  
#1723

SUBJECT:

REPLY TO:  
Audit Liaison Office  
P. O. Box 8155  
S. W. Station  
Washington, D. C.

TO:

12 November 1965

SUBJECT: Evaluation Review of ECP-2 Under  
Contract AF 33(657)-12846  
Airborne Instruments Laboratory  
Deer Park, New York

TO : Contracting Officer

REF: : AIL Proposal ECP #1940-2, dated 22 October 1965

1. A review has been made, to the extent deemed necessary of the contractor's cost proposal for multiplexer switches. This review consisted of an examination of the underlying data in support of proposed labor rates, overhead rates, material pricing, travel and other direct costs. The direct labor hours, material requirements, the necessity for the proposed travel and overtime hours, are referred to for evaluation by a technical representative.

2. A summary of the contractor's proposal by element of cost and the auditor's recommendations are as follows:

	Per Contractor's Proposal	Auditor's Recommended Reduction	Ref. Notes
Direct Labor - Engineering	\$ 43,873	-0-	a
Direct Labor - Manufacturing	17,882	-0-	a
Engineering Burden 104%	45,628	878	b
Manufacturing Burden 72%	13,233	536	b
Raw Materials and Purchased Parts	24,295	2,209	c
Travel and Subsistence	2,737	-0-	d
Overtime Premium	1,918	-0-	e
Packaging and Shipping	140	-0-	f
Subtotal	\$149,706	3,623	
G & A 7.5%	11,228	418	b
Total Cost	\$160,934	\$4,041	
Fee Requested 8%	12,875		
Total Proposal	<u>\$173,809</u>		g

Ref. Notes:a. Direct Labor:

For the purpose of this report only, the auditor accepts the hourly labor rates used to extend the estimated labor hours. A comparison was made of the proposed composite rates used in each labor class with the actual incurred to date rates of the 1941/1942 programs. The subject effort will be performed by the same personnel. This comparison ascertained the reasonableness of the proposed hourly rates. Attached as Exhibit A, is the contractor's breakdown of the direct labor hours by class of labor and effort, which is offered as a guide for evaluating the estimated labor hours by a qualified technical representative.

b. Burdens and G & A:

The auditor questions the contractor's proposed burdens and G & A rates as excessive. Based on an analysis of the current year book rates (9 months ended 30 September 1965), the auditor is of the opinion, that the contractor may experience a lesser rate than proposed and therefore recommends the following:

	Engineering Burden	Manufacturing Burden	G&A
Rates Per Contractor's Proposal	104%	74%	7.5%
Rates Recommended by the Auditor	<u>102%</u>	<u>71%</u>	<u>7.4%</u>
Per cent of Rate Questioned	<u>2%</u>	<u>3%</u>	<u>.1%</u>
Burden Base Per Proposal	\$43,873	\$17,882	\$149,706
Per cent of Rate Questioned	<u>2%</u>	<u>3%</u>	<u>.1%</u>
Costs Questioned (Base x Rate Reduction)	<u>\$ 878</u>	<u>\$ 536</u>	<u>\$ 150</u>
G&A Base Costs Questioned			\$ 3,623
G&A Questioned @7.4%			<u>268</u>
Total G&A Questioned (\$150 + \$268)			<u>\$ 418</u>

c. Raw and Purchased Materials:

The contractor's proposed purchase parts were verified to vendor's quotes and prior buys of like items. The extensions and additions of the bill of materials were verified. No exceptions were noted, but the applicability of the proposed purchased parts to the procured equipment and the frequency of use, should be evaluated by a technically qualified representative.

The costs questioned of \$2,209 represents the auditor's exception to a 10% shrinkage factor applied to the total estimated costs of raw and purchased materials (non-recurring costs excluded.) The contractor could not support this factor with historical data or adequate back-up and is therefore questioned by the auditor.

d. Travel and Subsistence:

The contractor proposed two 2-day trips to the West Coast at \$381 each and two 3-day trips at \$416 each for the purpose of visiting the associate contractor. In addition, three 2-day trips are included for visitations to a West Coast vendor at a cost of \$381 each. The costs represent round-trip air fare of \$305, subsistence of \$35 per day and \$6 for travel to the airport. The auditor considers these costs acceptable, but recommends for further consideration of a technical representative the necessity for the number of trips.

e. Overtime Premium:

The auditor recommends the overtime premium for the further consideration of a qualified technical representative. The contractor's estimate is based on application of a 10% factor to the total estimated hours for labor classes V, VI, VII, VIII, and IX, and priced at  $\frac{1}{2}$  of the hourly rates for these classes. The basis for a 10% factor was not supported by the contractor. The contractor's computation of overtime premium is as follows:

<u>Labor Class</u>	<u>Hourly Rate</u>	<u>Total Estimated Hours Per Proposal</u>	<u>Overtime Premium Hours 10% of Estimated Hours</u>	<u>Overtime Premium Rate <math>\frac{1}{2}</math> of Hourly Rate</u>	<u>Total Overtime Premium Per Proposal</u>
V	\$4.50	\$2,710	\$270	\$2.25	\$ 608
VI	3.70	2,590	260	1.85	481
VII	3.27	2,860	290	1.62	470
VIII	2.80	2,390	240	1.40	336
IX	2.33	280	20	1.16	<u>23</u>
TOTAL Overtime Premium per proposal					<u>\$1,918</u>

f. Packaging and Shipping:

Considered acceptable for the purpose of this report.

g. Fee Requested:

The contractor has requested a fee based on 8% of the total.

WILLIAM F. EDWARDS  
Auditor General Representative (APL)

SCHEDULE OF DIRECT LABOR HOURSEngineering, Drafting & Publications - 100 hrs.Adm.    A        S        O        N        D        J        F        M

.25   .5   .5   .5   .5   .5   .25   3.0 MM X 180 = 540

.75   1.25   1.0

Buy Parts, Sched, Type Proc. &amp; AB

Eng.

Design EE        7 MM X 200        =    1400

ME        3 MM X 200        =    600

Test Proc.        .5 MM X 200        100

Handbook        .5 MM X 200        100

Photo Test-Unit

Bds.    .5 MM        100

B.B.-Test        1 MM        200

Prod. Test-Bds. } 45 ea.

Units } X 10        450

2950

Tech.

Design &amp; Make

BB Assy.        7 MM X 180        1260

Test Proc.        .5 MM X 180        90

Photo Test        .5 MM X 180        90

BB Test        2 MM X 180        360

Prod Test        45 ea. X 10        450

2250

Draft

PC-BS 6 BS X 180 ea.        1080

Assy. Dwg.        120

ECNS        300

Feb. -

	O	N	D	J	F	M	
MPC	.75	2	1	1	.5	.5	= 5.75 = 160 = 120

EE	1	1	1	1	4	X 100 = 7640
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and 100 Hrs. W &amp; A Superv.

740 Hrs.

Shops

BB - Mfg. (PC) Bds. 6 X 20 = 120

Mfg. Parts &amp; Chs. 150 hrs. 270

Proto - 50 Hrs. X 1

50 Hrs.

Prod. - 25 Hrs. ea. X 10

250 Hrs.

570 Hrs.

W & A

Proto - Wiring 6 Bds. @ 30 ea. 180

1 Assy. 150 330

Prod. 60 Bds. 24 ea.

1440

10 Assy. 80 ea.

800 2240

2570 Hrs.

Insp.

Parts Receiving 80 Hrs.

In Proc. 15% Shops W & A 470

550 Hrs.

Program Management

Reliability	.5 Man	6 Months	3 nms	IV	480
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Q.A.	.5 Man	6 Months	3 nms	IV	480
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Management Adm.	.5 Man	6 Months	3 nms	IV	480
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Management Eng.	.5 Man	6 Months	3 nms	IV	480
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Pack and Ship				VIII	20
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Secretary 10 Hrs x 8 Months

TV

80